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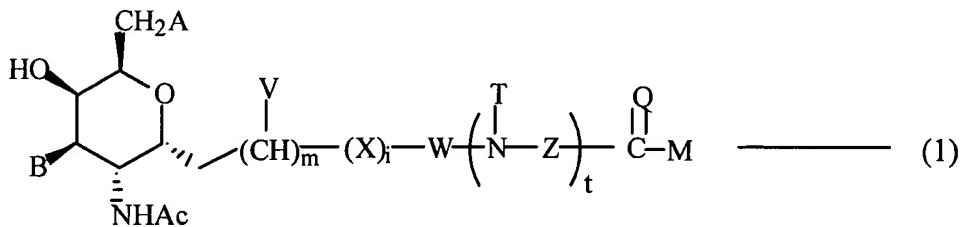
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: ) Group Art Unit: 1623  
)  
TOMIYAMA; UEYAMA; YANAGIYA; ) Examiner: Michael C. Henry  
OHKURA )  
)  
Serial No. 09/925,537 )  
)  
Filed: August 10, 2001 )  
)  
For: **NON-MUCIN TYPE SYNTHETIC COMPOUNDS OR ITS CARRIER  
CONJUGATED COMPOUNDS**

APPENDIX A

Please amend the claims as indicated according to 37 C.F.R. § 1.121 concerning a manner for making claim amendments.

1. (Currently Amended) A compound of the general formula (1),



wherein

A represents OH or sialic acid ~~and/or it's derivatives~~;

B represents OH or galactose and/or it's derivatives;

T represents H or protecting groups of amine;

M represents H or OH;

X represents oxygen atom,  $-\text{NH}-$  or  $\text{S}(\text{O})_z$  where  $z$  is 0, 1 or 2

+ ;

Q is oxygen atom and can be present or not present;

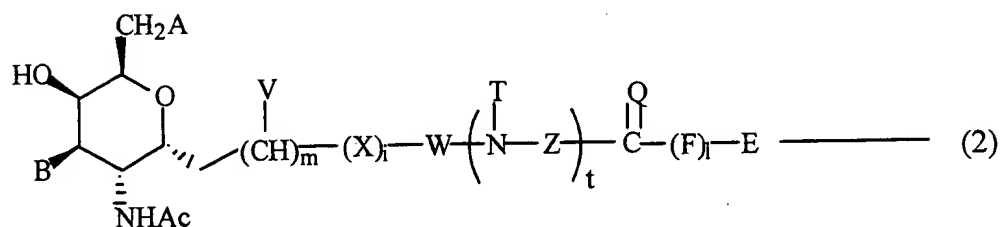
V represents lower alkyl or H;

W is straight or branched alkylene groups from 0 to 5;

Z is straight or branched alkylene groups from 1 to 5; and

i, m, and t is 0 or 1 with the proviso that i and t cannot be both 0.

2. (Currently Amended) A compound of the general formula (2),



wherein

A represents OH or sialic acid ~~and/or it's derivatives~~, and

B represents OH or galactose and/or it's derivatives;

T represents H or protecting groups of amine;

X represents oxygen atom, -NH- or S(O)<sub>z</sub> + where z is 0, 1 or 2

+ ;

Q is oxygen atom and can be present or not present;

V represents lower alkyl or H;

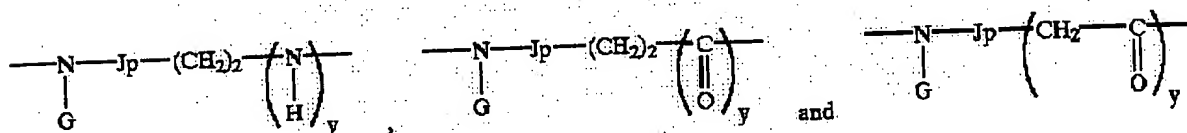
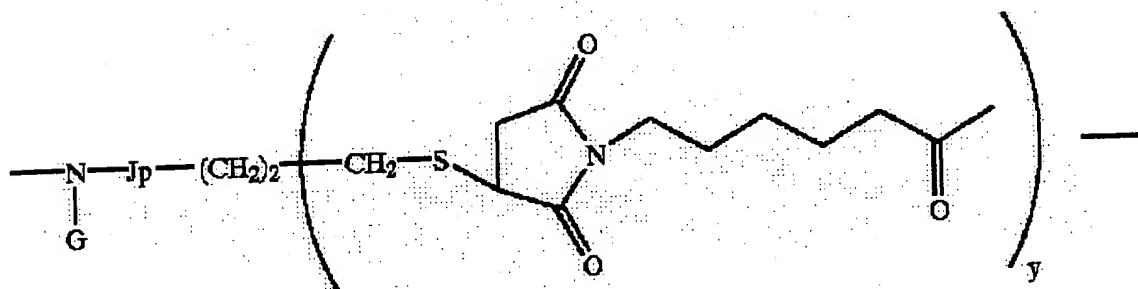
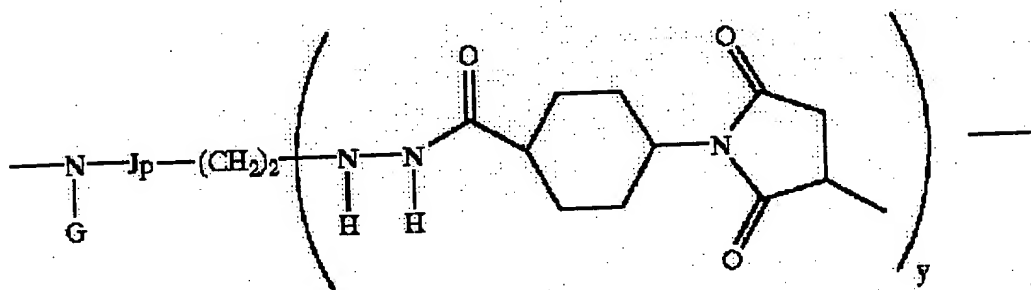
W is straight or branched alkylene groups from 0 to 5;

z is straight or branched alkylene groups from 1 to 5;  
i, m, and t is 0 or 1 with the proviso that i and t cannot be both 0;

E represents pharmaceutically acceptable carrier compounds;

l is 0 or 1;

F is showed followings,



wherein

J is  $-\text{CH}_2\text{CH}_2\text{X}-$  or  $-\text{N}(\text{L})-\text{CH}_2\text{CO}-$  where X represents oxygen atom,  $-\text{NH}-$  or  $\text{S}(\text{O})_z +$  where z is 0, 1 or 2 + ;

L is H or lower alkyl;

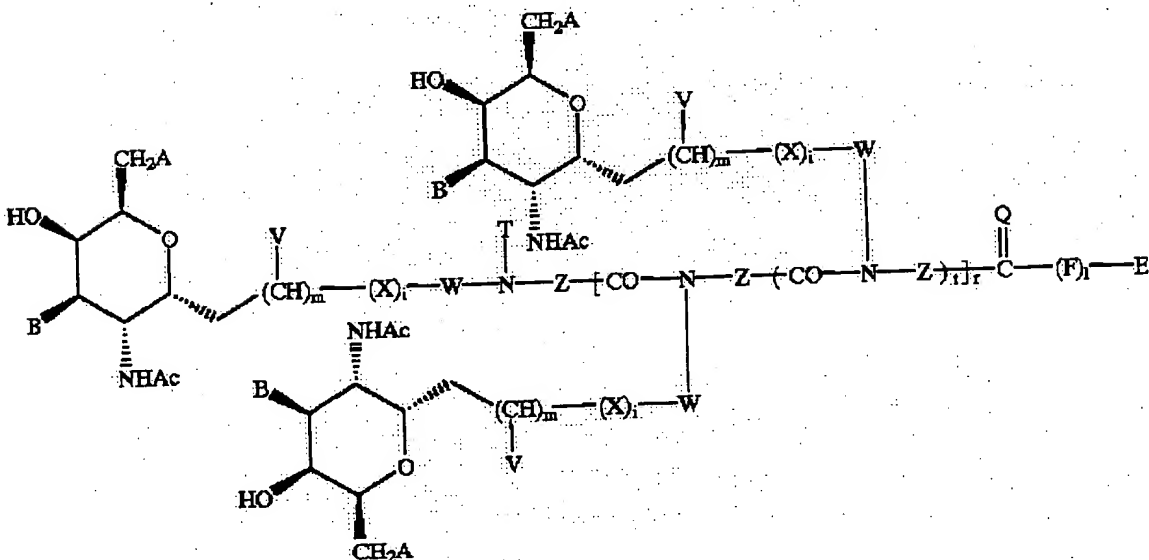
G is H or lower alkyl;

p is 0 to 3; and

y is 0 or 1.

3. (Currently Amended) A compound of the general formula (3),

(3)



wherein

A represents OH or sialic acid ~~and/or it's derivatives~~, and

B represents OH or galactose and/or it's derivatives;

T represents H or protecting groups of amine;

X represents oxygen atom,  $-\text{NH}-$  or  $\text{S}(\text{O})_z +$  where z is 0, 1 or 2

V represents lower alkyl or H;

z is straight or branched alkylene groups from 1 to 5;

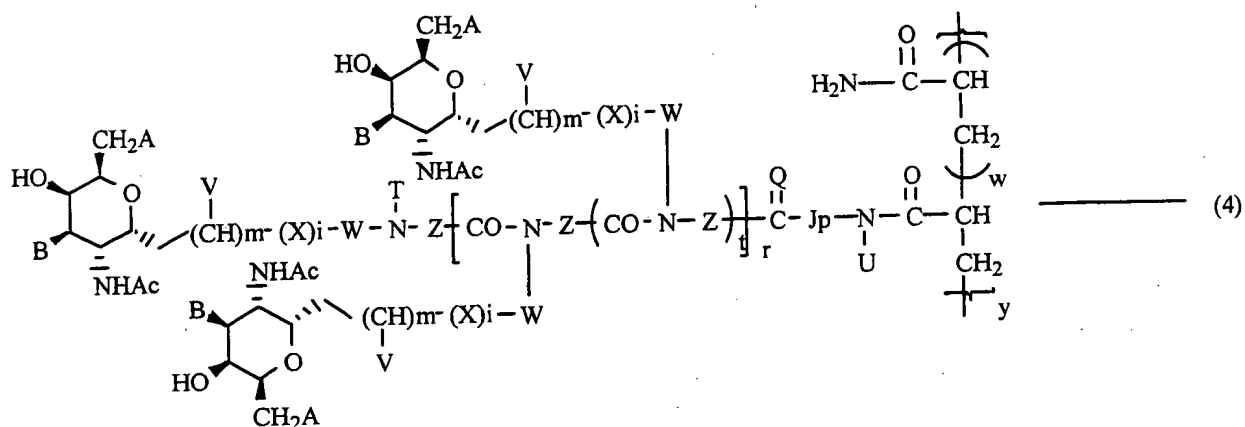
i, m, and t is 0 or 1;

E represents pharmaceutically acceptable carrier compounds;

1 is 0 or 1; and

r is from 1 to 4.

4. (Currently Amended) A compound of the general formula (4),



wherein

B represents OH or galactose and/or it's derivatives;

T represents H or protecting groups of amine;

X represents oxygen atom, -NH- or S(O)<sub>z</sub> + where z is 0, 1 or 2

+ ;

Q is oxygen atom and can be present or not present;

V represents lower alkyl or H;

W is straight or branched alkylene groups from 0 to 5;

Z is straight or branched alkylene groups from 1 to 5;

J is  $-\text{CH}_2\text{CH}_2\text{X}-$  or  $-\text{N}(\text{L})-\text{CH}_2\text{CO}-$  where X represents oxygen atom,

$-\text{NH}-$  or  $\text{S}(\text{O})_z$  + where z is 0, 1 or 2 + ;

i, m, and t is 0 or 1;

p is 0 to 3;

r is from 1 to 4;

U represents H or lower alkyl;

w is 0 to 50; and

y is 1 or 50.

5. (Canceled)

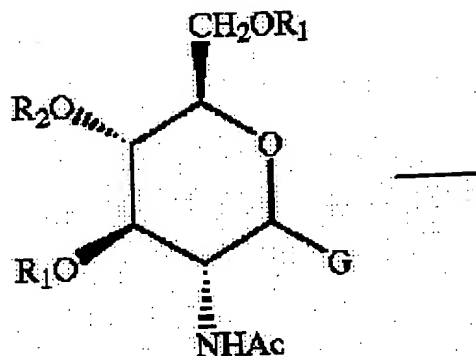
6. (Canceled)

7. (Canceled)

8. (Withdrawn) A process for the preparation of a galactopyranose, which proparty of inversion of  $\text{OR}_2$  to  $\text{OR}_1$  in above mentioned glucopyranose derivatives to obtain a compound of the

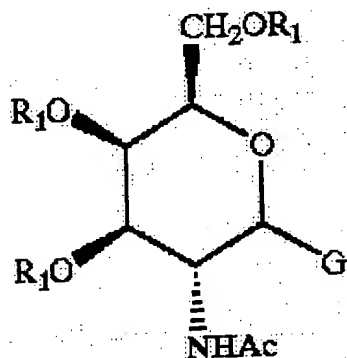
general formula (6)

(5)



wherein  $\text{OR}_1$  is H or protecting group of a hydroxyl group such as acetyl group;  $\text{R}_2$  is leaving group such as tosylate, trifluoromesylate or methanesulfonate;  $\text{G}$  is allyl or protected hydroxyl group.

(6)



9. (Canceled)

10. (Canceled)

11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Canceled)
16. (Canceled)
17. (Currently Amended) The compound thereof of claim 1, wherein A is sialic acid ~~and/or its derivatives~~ and B is OH.
18. (Currently Amended) The compound thereof of claim 2, wherein A is sialic acid ~~and/or its derivatives~~ and B is OH.
19. (Currently Amended) The compound thereof of claim 3, wherein A is sialic acid ~~and/or its derivatives~~ and B is OH.
20. (Currently Amended) The compound thereof of claim 4, wherein A is sialic acid ~~and/or its derivatives~~ and B is OH.
21. (Previously presented) The compound thereof of claim 1, wherein A is OH and B is galactose and/or its derivatives.
22. (Previously presented) The compound thereof of claim 2,



wherein A is OH and B is galactose and/or its derivatives.

23. (Previously presented) The compound thereof of claim 3, wherein A is OH and B is galactose and/or its derivatives

24. (Previously presented) The compound thereof of claim 4, wherein A is OH and B is galactose and/or its derivatives

25. (Previously presented) The compound thereof of claim 1, wherein both A and B are OH.

26. (Previously presented) The compound thereof of claim 2, wherein both A and B are OH.

27. (Previously presented) The compound thereof of claim 3, wherein both A and B are OH.

28. (Previously presented) The compound thereof of claim 4, wherein both A and B are OH.

29. (Withdrawn) Immunotherapy using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 1.

30. (Withdrawn) Immunotherapy using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 2.

31. (Withdrawn) Immunotherapy using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 3.

32. (Withdrawn) Immunotherapy using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 4.

33. (Withdrawn) Monoclonal antibodies prepared using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 1.

34. (Withdrawn) Monoclonal antibodies prepared using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 2.

35. (Withdrawn) Monoclonal antibodies prepared using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 3.

36. (Withdrawn) Monoclonal antibodies prepared using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 4.

37. (Withdrawn) Antitumor agents containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 1 as an active ingredient.

38. (Withdrawn) Antitumor agents containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 2 as an active ingredient.

39. (Withdrawn) Antitumor agents containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 3 as an active ingredient.

40. (Withdrawn) Antitumor agents containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 4 as an active ingredient.

41. (Withdrawn) Tumor immunostimulant containing the non-mucin type synthetic compound or carrier conjugated compound

thereof of claim 1 as an active ingredient.

42. (Withdrawn) Tumor immunostimulant containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 2 as an active ingredient.

43. (Withdrawn) Tumor immunostimulant containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 3 as an active ingredient.

44. (Withdrawn) Tumor immunostimulant containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 4 as an active ingredient.

45. (Withdrawn) Anti human immunodeficiency virus (HIV) agents containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 1 as an active ingredient.

46. (Withdrawn) Anti human immunodeficiency virus (HIV) agents containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 2 as an active ingredient.

47. (Withdrawn) Anti human immunodeficiency virus (HIV)

agents containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 3 as an active ingredient.

48. (Withdrawn) Anti human immunodeficiency virus (HIV) agents containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 4 as an active ingredient.

49. (Withdrawn) An immunostimulant for human immunodeficiency virus (HIV) containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 1 as an active ingredient.

50. (Withdrawn) An immunostimulant for human immunodeficiency virus (HIV) containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 2 as an active ingredient.

51. (Withdrawn) An immunostimulant for human immunodeficiency virus (HIV) containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 3 as an active ingredient.

52. (Withdrawn) An immunostimulant for human immunodeficiency

virus (HIV) containing the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 4 as an active ingredient.

53. (Withdrawn) A therapeutic method for tumor treatment using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 1 as an active ingredient.

54. (Withdrawn) A therapeutic method for tumor treatment using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 2 as an active ingredient.

55. (Withdrawn) A therapeutic method for tumor treatment using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 3 as an active ingredient.

56. (Withdrawn) A therapeutic method for tumor treatment using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 4 as an active ingredient.

57. (Withdrawn) A therapeutic method for treatment of HIV using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 1 as an active ingredient.

58. (Withdrawn) A therapeutic method for treatment of HIV using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 2 as an active ingredient.

59. (Withdrawn) A therapeutic method for treatment of HIV using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 3 as an active ingredient.

60. (Withdrawn) A therapeutic method for treatment of HIV using the non-mucin type synthetic compound or carrier conjugated compound thereof of claim 4 as an active ingredient.

61. (Canceled)